

CLAIMS

I claim:

1. Method for using surface-tension properties of polished vinyl and other plastic sheeting as a reusable seal on a vacuum pressing bag. Taking advantage of the material's surface tension, the seal is created when the vinyl is pressed into contact with the corresponding material. Hand pressure will flatten the two sheets together where surface tension will create the seal that converts the bag into a vacuum chamber. The flap over the slit protects the seal and is used as a handle to open the bag.
2. A process for using a vacuum bag chamber as a press for drying items contained within by applying pressure of 20in/Hg and greater. The bag is welded on all four edges with a slit in the upper panel and a flap overlapping the slit. The item or work is placed inside the bag through the slit and placed away from the slit so that the upper and lower parts of the bag will come into intimate contact with each other at the leading edge of the slit.
3. Attaching a one-way quick-disconnect valve to the bag allows the bag to be evacuated and detached from the vacuum pump. This frees the work space for other uses as well as multiplying the available pressing devices with low-cost vacuum bags. Because the bags continue to hold contents under pressure until the pressing cycle is complete, production bottlenecks at this point are diminished.

ABSTRACT

Method for using surface-tension properties of polished vinyl or other plastic sheeting as a reusable seal on a vacuum pressing bag. The bag must be of a high surface tension material such as polished vinyl to create the friction to create a seal. The vinyl bag consists of at least two pieces of vinyl welded at the edge on all sides. A slit through one piece of vinyl allows entry into the bag. Another vinyl strip that is wider and longer than the slit is placed over the opening. The polished surface of the vinyl or other polymer creates surface tension that "self-seals" under mild hand pressure creating a complete seal after suction is supplied to achieve evacuation. This surface tension is not released until the

vinyl flap is pulled away from the slit. Because the "seal" is created using a physical property of the bag material, it will never wear out. If the seal is complete, constant pressure on the contents of the bag is maintained while evacuation proceeds. A conventional vacuum pump produces the vacuum. To ensure long-term vacuum pressure, a permanently affixed quick-disconnect one-way valve is employed allowing the bag to be removed from the pump and set aside. This flexibility allows the bags to be stored out of the way, returning the work area to other pursuits. In addition, the item can be pressed for long periods without the necessity for additional suction to the bag system. This invention is designed to aid in lamination of three-dimensional objects such as books, veneer and art objects as well as drying wet objects where moisture must be drawn off quickly with the aid of pressure.